

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

New claims 21-37 have been added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-37 are now pending in this application.

Priority

Applicant notes that not all boxes acknowledging Applicant's claim for foreign priority were checked in the Office Action Summary. Applicant respectfully requests that the Office acknowledge Applicant's claim for foreign priority by checking all boxes in the next Office correspondence.

Information Disclosure Statements

Applicant acknowledges receipt of signed and initialed copies of the PTO/SB/08 forms submitted with Information Disclosure Statements on September 1, 2006 and June 20, 2007. Applicant notes that the enclosed copy of the PTO/SB/08 form submitted with an Information Disclosure Statement on November 16, 2006 was signed but not initialed. Applicant respectfully requests that the Office provide a signed and initialed copy of this PTO/SB/08 form with the next Office correspondence.

Rejection under 35 U.S.C. § 102

Claims 1-6, 8-11, and 15-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pub. No. 2003/0067219 to Seto *et al.* (hereafter “Seto”). This rejection is respectfully traversed.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See generally M.P.E.P. § 2131.

Claim 1 recites a system for assisting a driver operating a vehicle traveling on a road, the system comprising a device arrangement configured to determine an obstacle as a target obstacle in a path of the vehicle and to determine information on the target obstacle and width of the target obstacle; a device configured to detect a status of the vehicle; a device configured to determine a risk that the vehicle may come into contact with the target obstacle based on the information on the target obstacle and the detected status of the vehicle; and a control arrangement configured to regulate at least one of a reaction force input to the driver and a force applied to the vehicle based on the determined risk and the width of the target obstacle. Claims 15, 17, and 19 include similar language. Claims 2-6 and 8-11 depend from claim 1, claim 16 depends from claim 15, claim 18 depends from claim 17, and claim 20 depends from claim 19.

Seto discloses an automatic brake system that includes a scanning type laser-radar that periodically scans a laser ray over an angle range to determine a vehicle interval distance. See Seto at paragraphs 0019-0021. Seto discloses that based on information from the laser-radar, distances between the right rear edge of the preceding vehicle and the laser-radar, and between the left rear edge of the preceding vehicle and the laser-radar are determined, along with angles of the right and left rear edges of the preceding vehicle relative to the laser-radar. See Seto at paragraph 0024. A needed lateral move distance is calculated on the basis of this detected data. See Seto at paragraph 0024-0032.

The Office argues on page 2 of the Office Action that Seto discloses a system that is configured to determine the width of a target obstacle in a path of a vehicle, as recited in claims 1, 15, 17, and 19. However, Seto only discloses a system that determines a distance between a laser-radar and each of a left and right rear edge of a preceding vehicle, and relative angles between the left and right rear edges and the laser-radar. Seto does not disclose that the system is configured to determine or provide a width of the preceding vehicle. Seto only discloses the use of the host vehicle's width when calculating a needed lateral moved distance to avoid a preceding vehicle, not the width of a preceding vehicle. See Seto at paragraphs 0026-0028.

Seto does not anticipate claims 1-6, 8-11, and 15-20 because Seto does not disclose all of the features of claims 1, 15, 17, and 19 for at least the reasons discussed above.

Claim 3

Claim 3 depends from claim 1 and is allowable over Seto for at least the reasons discussed above. Claim 3 further recites "wherein the device arrangement includes a width measurement device configured to measure a width of the target obstacle, and the control arrangement includes a correction device configured to correct the control amount on the basis of the measured width of the target obstacle." As discussed above in regard to claims 1, 15, 17, and 19, Seto fails to disclose a system that measures a width of a target obstacle in a path of a vehicle. Thus, Seto does not disclose a width measurement device. Nor does Seto disclose a control arrangement that is configured to correct a control amount on the basis of such a measured width. The Office cites paragraph 0032 of Seto on page 3 of the Office Action in support of its argument. However, this paragraph discusses how the system of Seto selects the smaller of the two angles between the laser-radar and the left and right rear edges of a preceding vehicle when determining a needed lateral moved distance, not the measurement of a width of a target obstacle in a path of a vehicle or the correction of a control amount on the basis of such a width.

For at least the reasons discussed above, reconsideration and withdrawal of this rejection is respectfully requested.

Rejection under 35 U.S.C. § 103

Claims 7 and 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Seto in view of U.S. Patent No. 6,624,747 to Friedrich *et al.* (hereafter “Friedrich”). This rejection is respectfully traversed.

The teachings of Friedrich do not remedy the deficiencies of Seto discussed above in regard to independent claim 1, from which claims 7 and 12-14 depend. For example, Friedrich discloses a system for preventing a collision of a vehicle with an obstacle that uses object-detecting sensors 51, 52 to detect a headway between the vehicle and an obstacle, the difference in speed between the vehicle and the obstacle, and the degree of overlap between the vehicle and the obstacle. See Friedrich at col. 3, line 56, to col. 4, line 37. However, Friedrich does not disclose or suggest that the system is configured to determine or provide a width of the obstacle. Therefore, the combination of Seto and Friedrich does not render claims 7 and 12-14 to be unpatentable because this combination does not disclose or suggest all of the features of claim 1.

Claims 12-14

Claims 12-14 depend from claim 1 and are allowable over Seto and Friedrich for at least the reasons discussed above. Claims 12-14 generally recite that a control amount is variable with a gain that increases as an overlap between a vehicle and an obstacle increases, as recited in claims 12-14. The combination of Seto and Friedrich does not disclose or suggest such features. The Office argues on page 5-6 of the Office Action that the combination of Seto and Friedrich discloses the features of claims 12-14, citing Friedrich in particular. However, although Friedrich discloses the determination of an overlap between a vehicle and an obstacle, Friedrich does not disclose a control amount that is variable with a gain that increases as the overlap increases, as recited in claims 12-14.

For at least the reasons discussed above, reconsideration and withdrawal of this rejection is respectfully requested.

New Claims

New claims 21-37 have been added. Claims 21-27 depend from claim 1 and are allowable over the prior art for at least the reasons discussed above and for their respective additional recitations.

Claim 28 recites a system comprising, among other things, an obstacle recognition device configured to determine a distance from a vehicle to each detected obstacle, a lateral distance from the vehicle to each of the detected obstacles, and a width of each of the detected obstacles, as recited in claim 28. Claims 29-37 depend from claim 28. As discussed above, Seto and Friedrich do not disclose or suggest a system that determines or recognizes a width of a detected obstacle. Nor do Seto and Friedrich disclose such a system comprising, among other things, a main controller configured to determine, when a risk in relation to a vehicle and a target obstacle is higher than a predetermined value, a repulsive force based on a spring force of an imaginary elastic body and an overlap ratio, and to calculate a driving force correction amount and a braking force correction amount based on the repulsive force, as recited in claim 28.

Conclusion

Applicant submits that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If

any extensions of time are needed for timely acceptance of papers submitted herewith,
Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment
of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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